

CLAIMS

1. A method for processing signaling data and for controlling connections in a packet-switching communications network, wherein the packet-switching communications network includes at least one subscriber, the method comprising the steps of:
 - controlling, via a network element, a concentrator interface using at least one connecting unit such that the network element makes resources available to it;
 - transmitting signaling data for subscriber signaling of the subscriber between at least one packed control unit of the network element and the connecting unit of the network element via a message distribution system of the network element;
 - converting the signaling data of the network element by the packet control unit into signaling packets of the packet-switching communications network and vice versa; and
 - transmitting the signaling packets between the packet control unit and the subscriber.
2. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein the network element is a switching office of a circuit-switching telecommunications network.
3. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the steps of:
 - administering and operating the subscriber in the network element as a subscriber which is connected using the concentrator interface; and
 - using the resources made available to the concentrator interface for the subscriber.

4. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein functions of one of a main line and an extension are available to the subscriber in the network element.

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5. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein the concentrator interface is administered and operated as at least one of a V5.2 interface, a TR303 interface, a V93 interface and a V95 interface.

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6. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

bidirectionally transmitting, via one of PCM connections and SDH connections of the concentrator interface, user data to an interface unit which converts the user data between a format which is customary in the packet-switching communications network and a format which is customary in the circuit-switching communications network.

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7. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 6, wherein the interface unit is a media gateway which converts the user data bidirectionally between packet format and TDM format.

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8. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 6, the method further comprising the step of:

controlling the interface unit via line trunk groups of the network element which control the concentrator interface.

9. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

characterizing the concentrator interface in a database of the network
5 element as a concentrator interface for connecting subscribers of the packet-switching communications network.

10. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

routing the subscriber in a database of the network element as a subscriber of the packet-switching communications network.

11. A method for processing signaling data and for controlling
15 connections in a packet-switching communications network as claimed in claim 10, wherein the concentrator interface for connecting subscribers of the packet-switching communications network can be assigned only subscribers which are subscribers of the packet-switching communications network.

20 12. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein at least one of functions of the concentrator interface for connecting subscribers of the packet-switching communications network which are not required are deactivated, and messages of the functions are suppressed in the
25 network element.

13. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein subscribers of the circuit-switching communications network are assigned

to only one concentrator interface of the network element which is provided for connecting subscribers of the circuit-switching communications network.

14. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 2, wherein assignment of the subscribers to at least one the concentrator interfaces of the network element and connecting units of the network element is carried out in a database of the switching office using an operator interface of the network element.

15. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

actuating, via the network element, a plurality of concentrator interfaces to which a respective plurality of subscribers can be assigned.

16. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

exchanging the signaling of the subscriber of the packet-switching communications network between subscribers and the network element using a physical interference of one of the packet control unit and the message router system of the network element.

17. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

assigning a call number to the subscriber in the network element, wherein the subscriber in the packet-switching communications network has a subscriber address, and the assignment between the subscriber address and the call number is made using a control unit.

18. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 16, wherein the control unit is a data processing system which is assigned to the network element.

19. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein the subscriber is administered as a subscriber with an ISDN basic access in the network element.

20. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 19, wherein the ISDN basic access is one of an ISDN basic access in point-to-point configuration or an ISDN basic access in point-to-multipoint configuration.

21. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

transmitting the user data using the network element when there is a connection between the subscriber and a second subscriber.

22. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, the method further comprising the step of:

transmitting the user data directly between the subscribers using the packet-switching communications network when there is a connection between the subscriber and a further subscriber of the packet-switching communications network.

23. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein the packet-switching communications network is an Internet-protocol-based network.

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24. A method for processing signaling data and for controlling connections in a packet-switching communications network as claimed in claim 1, wherein the signaling of the subscriber is carried out in accordance with one of the H.323 Standard and the SIP Standard.

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25. A network element for processing signaling data and for controlling connections of subscribers of a packet-switching communications network, comprising:

15 a concentrator interface which is controlled using at least one connecting unit of the network element, the concentrator interface making available resources of the network element;

a packet-switching communications network with at least one subscriber; and

20 at least one packet control unit which connects a message router system of the network element to the connecting unit, signaling data for subscriber signaling being transmitted between the packet control unit of the network element and the connecting unit of the network element via the message router system of the network element, the signaling data of the network element being converted into signaling packets of the packet-switching communications network by the packet
25 control unit, and vice versa, and the signaling packets being transmitted between the packet control unit and the subscriber.

26. A network element for processing signaling data and for controlling connections of subscribers of a packet-switching communications network as
30 claimed in claim 25, wherein the network element contains both units of a

conventional switching office of a line-switching communications network and at least one packet control unit.

27. A network element for processing signaling data and for controlling
5 connections of subscribers of a packet-switching communications network as claimed in claim 25, wherein the packet-switching communications network is an Internet-protocol-based network.

28. A network element for processing signaling data and for controlling
10 connections of subscribers of a packet-switching communications network as claimed in claim 25, wherein the signaling of the subscriber is carried out in accordance with one of the H.323 Standard and the SIP Standard.